

REMARKS

Applicants respectfully submit that no new matter is presented by the present amendment. Claims 1-18 have been canceled, and claims 19-30 remain pending in the present application. The following remarks are in response to an Office Action for the parent application which was mailed on May 27, 2003, where the Examiner:

- 1) allowed claims 1-18;
- 2) rejected claims 19-21 and 26 under 35 U.S.C. 103(a) as being unpatentable over Pat. No. EP 0956960 (hereinafter "Hickman") in view of U.S. Pat. No. 5,786,830 (hereinafter "Su"); and
- 3) objected to claims 22-25 as depending upon a rejected base claim.

The allowance of claims 1-18 is acknowledged. These claims are canceled herein without prejudice by this preliminary amendment, as they remain pending in the parent application. Claims 22-25 have been rewritten in independent form and added as new claims 27-30 to place the claims in condition for allowance. Reconsideration of the rejected claims is respectfully requested in view of the following remarks.

REJECTIONS UNDER 35 USC 103(a)

The Examiner has rejected claims 19-21 and 26 under 35 U.S.C 103(a) as being unpatentable over Hickman in view of Su. These rejections are respectfully believed to be based on an erroneous interpretation of the prior art when taken as a whole and applied to the presently claimed invention.

The system of claim 19 comprises a pigment-based ink-jet ink and a dye-based ink-jet ink that are "substantially non-reactive." Claim 19 also specifies that the pens be

“swappable.” With respect to this specific claim set, the Applicants intend the claims to cover embodiments where one pen may be removed from the printhead assembly and replaced by another pen. For example, the pigment-based ink-jet ink pen can be removed from the printhead assembly and replaced with the dye-based ink-jet ink pen. As stated in the specification on page 10 lines 3-5, “...a pen containing the black pigment-based ink-jet ink can be replaced with a pen containing a dye-based ink-jet ink...” This “swapping” may be a result of changing to a more desirable ink type to match a given paper type, for example. Claim 19 has been amended to more clearly define what is meant by the term “swappable” as it pertains to claims 19-26 only.

In addition, claim 19 also requires “a single service station configured for servicing the first ink-jet pen and the second ink-jet pen.” Because of the swappable nature of the ink-jet pens, the same components (e.g. a wiper and cap as characterized by the prior art) in the service station will naturally come in contact with both pens. For example, a given wiper and cap will service the pigment-based ink-jet pen until it is swapped for a dye-based ink-jet pen. From that point on, the same wiper and cap will now service the dye-based ink-jet pen. If it were not a requirement of the claims that the pigment-based ink and the dye-based ink were “substantially non-reactive,” then the residue ink on the wiper and cap would react with the other type of ink when the pens were swapped, thus leading to clogging problems.

With this background in mind, we turn to the question of whether, as set forth in MPEP § 706.02(j), the prior art references teach or suggest all of the claim limitations. To accomplish this, the prior art references must teach a system with (1) swappable ink-jet pens, wherein one of the pens contains (2) a pigment-based ink and the other pen contains (3) a dye-based ink. It is required that the pigment-based ink and the dye-based

ink be (4) substantially non-reactive with one another. Claim 19 also requires that both pens be serviced by (5) the same service station.

Hickman Reference

Hickman teaches an ink-jet printing system that utilizes reactive inks to obtain enhanced printing results. The system utilizes a colorless reactant fluid that may be devoid of color or contain a dye or pigment that does not absorb visible light. See column 6 lines 40-45. This reactant fluid reacts with ink-jet inks in the system to enhance the printed image. Hickman also teaches that one of the inks be non-reactive with the reactant fluid which, in this case, is cyan. Hickman does not teach, however, a non-reactive ink-jet ink system with a pen containing a pigment-based ink that can be swapped for a pen containing a dye-based ink that do not react with one another. The Examiner has stated that Hickman discloses “a first pen containing a pigment-based ink-jet ink (black ink) (column 15, line:45-55); a second ink-jet pen containing a dye-based ink-jet ink (cyan ink) (column: 16, line:5-10); . . .” However, the reference to a pigment-based ink-jet ink is an example quoted by Hickman from the Ma patent application (09/064,643). The cyan dye in Ma contains a multivalent metal salt in order to make the dye reactive with the black pigment-based ink (see column 16, lines 6-7 and 16-19).

Hickman does not teach a pen containing a pigment-based ink-jet that is non-reactive with a pen containing a dye-based ink-jet ink. Hickman also does not teach swappable ink-jet pens as clarified by the claim amendment. The order of the pens in Hickman could be constructed in various ways, however the pens are not swappable in the sense that they can be individually replaced or switched with one another.

Additionally, as pointed out by the Examiner, Hickman does not teach a single service station.

Su Reference


Su teaches an adaptive wiping method of cleaning two or more diverse printheads that have different wiping needs. Su utilizes multiple sets of wipers and caps to service multiple printheads. The Examiner has stated that Su teaches a single service station to wipe the first and second printhead. It is clear from FIG. 2, however, that each printhead is serviced by a separate mechanism, with its own wiper and cap. Su is therefore teaching multiple service stations to service multiple printheads. Also, the abstract states that “[e]ach printhead has an associated wiper that is mounted on a single service station sled for relative movement with respect to the printheads to achieve wiping contact.” (underlining added). A single sled for multiple pens is not the same thing as a single service station.

Su does not suggest a single service station that claim 19 would read on. Logically, if a wiper is included in a service station embodied by the present invention, that wiper will be used to wipe the first pen and then to wipe the second pen once they are swapped. This teaching is contrary to Su, which teaches a mechanism to clean multiple printheads with diverse wiping needs. See Abstract. A system including two non-reactive inks that can be swapped for one another would not require “diverse wiping needs” as set forth in Su.

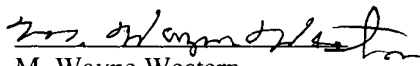
As per the above preliminary amendments and remarks, the Applicants believe that claims 19-30 represent allowable subject matter, and their allowance is respectfully

requested. If, for any reason, a telephone interview would be helpful in resolving any issues, the Examiner is invited to call the Brad Haymond at (541) 715-0159.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

 Dated this 27th day of Aug, 2003.

Respectfully submitted,



M. Wayne Western
Attorney for Applicant
Registration No. 22,788

Of:

THORPE NORTH & WESTERN, LLP
8180 South 700 East, Suite 200
Sandy, Utah 84070
(801) 566-6633

On Behalf Of:

HEWLETT-PACKARD COMPANY
1000 NE Circle Blvd., m/s 422B
Corvallis, OR 97330-4239
(541) 715-0159